REMARKS

The Office Action of June 8, 2010, has been carefully studied. Claims 1-9 currently appear in this application. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration and formal allowance of the claims.

Claim Interpretations

Claim 5 has been amended to insert a comma between "can" and "is" and to recite that H is equal to or greater than 0.5.

Claim Objections

Claims 3 and 6 are objected to because the recitation of initial thickness of a plate not less than 50% does not appear to be in proper English. This phrase has been corrected to "wherein the thickness of the aluminum plate that has been coated with polyester resin is decreased not less than 50% of the initial thickness of the plate by draw-ironing and/or stretch-drawing."

Rejections under 35 U.S.C. 112

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This rejection is respectfully traversed.

Submitted herewith is a drawing showing stress vs. strain that is typical or structural steel. In the apparent stress of this graph, the "tensile stress" means "ultimate strength 1", which is the maximum stress on the stress-strain curve. On the other hand, "tensile stress" does not refer to "tensile stress at break." Accordingly, it is respectfully submitted that claim 1 is definite.

Art Rejections

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamaki et al., US 6,099,924.

This rejection is respectfully traversed.

The Examiner refers to column 4, lines 37-57 of Nakamaki as disclosing a heat of fusion greater than 15 J/g, and also concedes that Nakamaki does not specifically teach that the polyester resin layer has the

recited H value of equal to or greater than 0.5. However, while it is true that Nakamaki teaches that 9200 J/mol is the quantity of heat of fusion of crystalline polyester composed chiefly of polyehthylene terephthalate, the heat of fusion of 9200 J/mol is much lower than 15 J/g, since the molecular weight of polyester is around 60,000. The Nakamaki heat of fusion would thus be 9200 J/60,000 g, or approximately 0.15. Clearly the heat of fusion of the presently claimed polyester is two orders of magnitude higher than that of Nakamaki. Moreover, 15 J/g is but one of the key factors in obtaining a resin-coated aluminum seamless can body having excellent body burst resistance, high strength to piercing, excellent anti-piercing properties and excellent flange crack resistance in distribution.

Reconsideration and withdrawal of the rejection are earnestly solicited.

Claims 1-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamaki in view of Robertson, US 4,260,419.

This rejection is respectfully traversed.

As noted above, the polyester resin in the herein claimed can body is quite different from that disclosed in Nakamaki. Robertson adds

nothing to Nakamaki, because Robertson merely discloses an aluminum sheet that has an ultimate tensile strength (which is expressed as tensile stress in the presently claimed can body) of 262-317 MPa and another material for making cans that has an ultimate tensile strength of 320-380 MPa. However, "tensile stress at break" in the presently claimed can body means rupture strength, not ultimate tensile strength. Further, Roberson shows an ultimate tensile strength of **<u>the aluminum sheet itself</u>**, not the coated aluminum can body formed by draw-ironing and/or stretch-drawing. The presently claimed can body recites the tensile stress at break of the aluminum plate that is removed from the thermoplastic resin on the side wall of the can. Thus, the object to be measured, the tensile stress at break of the presently claimed can body, is different from that to be measured the ultimate tensile strength that is measured in Robertson because the aluminum plate of the side wall of the present can has been formed by draw-ironing and/or stretch-drawing. Initially, the side wall material of an aluminum can body formed by draw-ironing and/or stretch-drawing is much harder than an aluminum sheet formed without such processing. It is because the metallographic structure of aluminum is changed by

draw-ironing and/or stretch-drawing. Additionally, the side wall material of an aluminum can body has an anisotropic property, especially between that in the direction of the circumference of the can and that of height of the can after draw-ironing and/or stretch-drawing. Furthermore, the tensile stress at break of 450 MPa or less in the direction of the circumference of the can is one of the key factors for obtaining a resin-coated aluminum seamless can body having excellent flange crack resistance in distribution. On the other hand, Robertson does not show direction in which to measure an ultimate tensile strength. Therefore, it is meaningless to compare the ultimate tensile strength of Robertson and the tensile stress at break of the presently claimed can body.

The present claims are drawn to an aluminum can body having a thermoplastic layer on at least one of the inner surface of the can and the outer surface of the can, such can body having superior resistance against cracks in the can wall during distribution as well as resistance against flange cracking. This is neither described nor suggested in either Nakamaki or Robertson, and thus it would not be obvious to one skilled in the art to obtain the resin-coated aluminum seamless can body claimed herein.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

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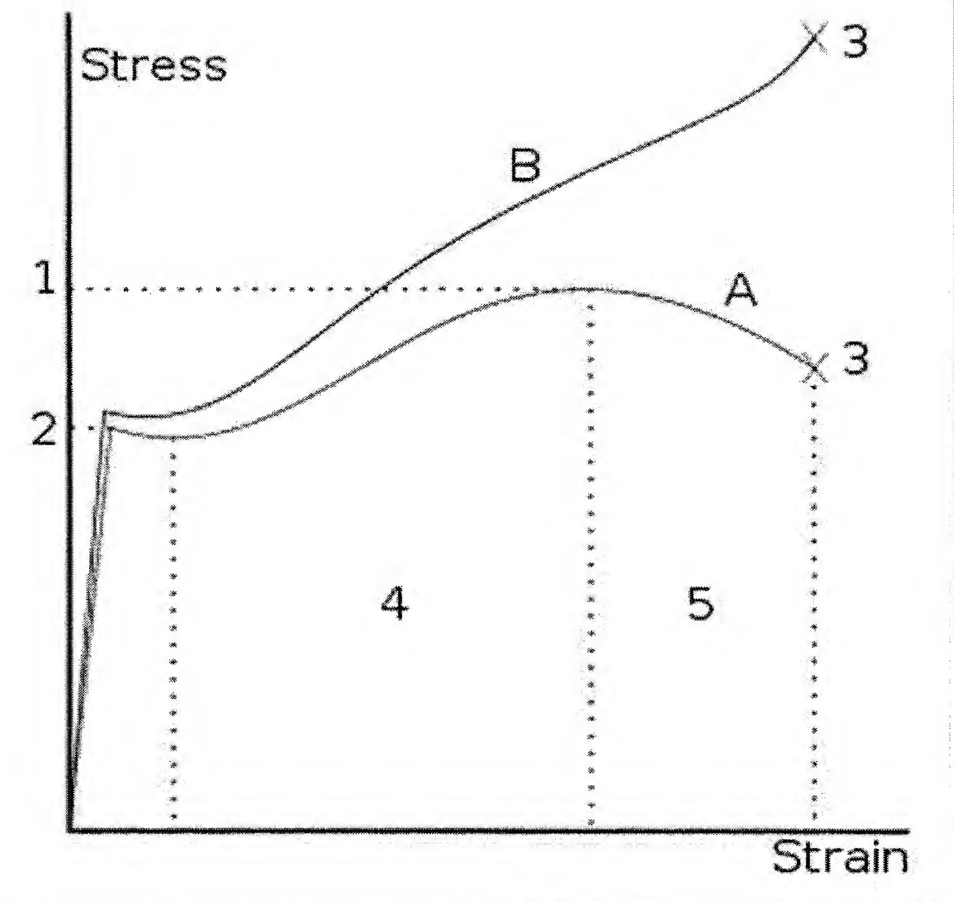

Stress vs. Strain curve typical of structural steel

1. Ultimate Strength
2. Yield strength
3. Rupture
4. Strain hardening region
5. Necking region.

A: Apparent (engineering) stress (F/A_0)

B: Actual (true) stress (F/A)

http://en.wikipedia.org/wiki/Tensile_strength